The Journal of Systems and Software

Volume 7, Number 1, March 1987

Contents

Editor's Corner 1
Robert Glass

Conceptual Modeling of Authorization in Database Systems 3
Mariagrazia Fugini and Giancarlo Martella

On the Use of Executable Assetions in Structured Programs 15
Ali Mili, Sihem Guemara, Ali Jaoua, and Paul Torrés

Resolving the Software Science Anomaly 29
D. N. Card and W. W. Agresti

A Database Foundation to Support Software System Evolution 37
K. Narayanaswamy and Walt Scacchi

Implementing an Analytic Model for Customer Information Control Systems (CICS) 51
Susan C. Felix-Simpson and H. Pat Artis

Automated Interactive Simulation Modeling System: AISIM 61
Michael F. Merriman

Toward a Formal Specification of Menu-Based Systems 73
James D. Arthur

Comments on Resolving the Software Science Anomaly 83
D. N. Card and W. W. Agresti

Biographies 85

The Journal of Systems and Software

Volume 7, Number 2, June 1987

Contents

Editor's Corner 87
Robert Glass

A Method for Test Data Selection 89
F. R. D. Velasco

On the Development of Reliable Large Software 99
Paolino Di Felice

A Formal Approach to Software Error Removal 109
Michael Dyer

A Software Development Productivity Model for MIS Environments 115
D. R. Jeffery

A Taxonomy for Programming Languages with Multisequential Processes 127
Kristine Stougaard Thomsen and Jørgen Lindskov Knudsen

Checksum Methodology as a Configuration Management Tool 141
Bradley J. Brown

Language Definition-Based Compiler Development 145
A. Rosselet

DRAT: A Program for Maintaining Listings 163
David Alex Lamb, Ivor Durham, and Joseph M. Newcomer

A Model for Software Sizing 173
June M. Verner and Graham Tate

Biographies 179

The Journal of Systems and Software

Volume 7, Number 3, September 1987

Contents

Editor's Corner 181
Robert Glass

Analysis and Development of Demand Prepaging Policies 183
R. Nigel Horspool and Ronald M. Huberman

Simple and Integrated Heuristic Algorithms for Scheduling Tasks with Time and Resource Constraints 195
Wei Zhao and Krithi Ramamritham

Marketing Methods for Software 207
Hershey H. Friedman and Linda Weiser Friedman

A Micro/Macro Measure of Software Complexity 213
Warren Harrison and Curtis Cook

Application of Program Design Language Tools to Abbott's Method of Program Design by Informal Natural Language Descriptions 221
Daniel M. Berry, Nancy Yavne, and Moshe Yavne

Biographies 249

The Journal of Systems and Software

Volume 7, Number 4, December 1987

Contents

Editor's Corner 251
Robert L. Glass

Recovering from a Computer Virus Attack 253
Frank G. F. Davis and Rex E. Gantenbein

Active Design Reviews: Principles and Practices 259
D. L. Parnas and D. M. Weiss

Experience with a Functionally Layered Multicomputer Architecture for Interactive Processing 267
Allen L. Ambler

SoftCost-R: User Experiences and Lessons Learned at the Age of One 279
Donald J. Reifer

An Identification and Investigation of Software Design Guidelines for Using Encapsulation Units 287
Daniel Joyce

A Comparison of Network and Hierarchical Data Management in Large Programming Projects 297
David W. E. Blatt

Formal Formatting Rules for Pascal Programs 311
Pierre L'Ecuyer

Special Section: Empirical Studies of Programming 323
Introduction by Elliot Soloway

Cognitive Processes in Program Comprehension 325
Stanley Letovsky

Mental Models and Software Maintenance 341
David C. Littman, Jeannine Pinto, Stanley Letovsky, and Elliott Soloway

Programmer–Nonprogrammer Differences in Specifying Procedures to People and Computers 357
Lisa A. Onorato and Roger W. Schvaneveldt

Biographies 370

Author Index to Volume 7 371

Subject Index to Volume 7 372

Volume Contents